

Work Order ID 165097

Tuesday, August 15, 2017 10:51:28 AM

165097

Ship 11 SEPT

Page 1

Item ID: D117-762-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 8/17/2017 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 8/29/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: DAS 21 9-89 Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start

NR1

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
DSI9771	A
IIN-D117-762	E

AUG 21 2017

100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	1.50							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP D117-762-011		CHG004						

DAS
27
9-89

SEP 08 2017

110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									

AUG 22 2017

DAS
27
9-89

SEP 08 2017

B#165094 x1

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165097

Page 2

Item ID: D117-762-011**Accept*****N900040100*****Setup Start *NS1*****Revision ID:****Stop *NS2*****Item Name:** Skidtube with Standard Wearplates Fits LH or RH**Start Date:** 8/17/2017 **Start Qty:** 1.00 ***1*****Cust Item ID:****Required Date:** 8/29/2017 **Req'd Qty:** 1.00 ***1*****Customer:****Reference:****Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____**Run Start *NR1*****QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____**Stop *NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120 QC4- 100% Inspect kits for completeness 0.00

120

QC Memo 0.03

Quality Control

DAS
28
9-89

SEP 0 8 2017

130 Packaging 0.00

130

Packaging Memo 0.00

Packaging Identify and pack for shipping as per PPP D117-762-011
Location :FG081DAS
27
9-89
SEP 0 8 2017
DAS
28
9-89

140 QC21- Final Inspection - Work Order Release 0.00

140

QC Memo 0.10

Quality Control

DAS
21
9-89

SEP 1 1 2017

DAS
21
9-89

SEP 1 1 2017

Picklist Print

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Page 1

Work Order ID: 165097

165097

Parent Item: D117-762-011

D117-762-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 8/17/2017

Required Date: 8/29/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A07.06.11New Issue EC
 IPP Rev:B 08-02-22 change to revA DD verified by:ec
 IPP Rev C 08.12.19 incorporated DSI9435 EC verified by:DD
 IPP REV:D 13.11.14 IIN REV.C DD VERF:JLM IPP
 REV:E 15.06.11 IIN REV.D DD VERF:JLM IPP REV:F
 17.01.17 PER CHG004 (dsi9771) DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN6C52A *AN6C52A* BOLT		Purchased	No			110	Each	25.0000	2	2			
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					ST333			25					
					m137490			5					
					m138281			20		2			
D5300-1 *D5300-1* GHL Bushing		Manufactured	No			110	Each	1.0000	2	2			
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					ST162			1					
					163432			1		165080			
D5301-1 *D5301-1* GHL Plug		Manufactured	No			110	Each	4.0000	2	2			
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					ST162			4					
					162337			4		165392			
D117-762-041 *D117-762-041* Replacement Skidtube		Manufactured	No			110	Each	0.0000	1	1			

AUG 22 2017

AUG 31 2017

SEP 01 2017

B165094

DAS 27 9-89

Picklist Print

Tuesday, August 15, 2017 10:51:32 AM

Page 2

Work Order ID: 165097

165097

Parent Item: D117-762-011

D117-762-011

Parent Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 8/17/2017

Required Date: 8/29/2017

Start Qty: 1.00

Required Qty: 1.00

D3512-041

Manufactured No

110 Each

11.0000

2 2

D3512-041

Wearplate

DAS
28
9-89

Location

Loc Qty

Loc Code

ST610

11

163362

11

**

AUG 22 2017

DAS
27
9-89

NB163362 DAS
6
9-89

AUG 31 2017

MS21043-6

Purchased No

110 Each

58.0000

2 2

MS21043-6

NUT

DAS
28
9-89

Location

Loc Qty

Loc Code

FG

20

103693

20

FP001

28

m135470

2

m138040

26

ST302

10

m137479

10

**

AUG 22 2017

DAS
27
9-89

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D117-762 REV. E AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D117-762 REV. 4

REF FAA STC: SR01853SE

REF: TC LETTER OF ACCEPTANCE RDIMS-4374899

REF EASA STC: EASA.10017063

1.0 PURPOSE

The purpose of this Dart Service Instruction (DSI) is to replace the ground handling lugs (D3864-1 Bushings, AN6C51A Bolts and MS21043-6 Nuts) on the D117-762-XXX Skid tubes with a structurally superior lug design (D5300-1 Bushings, D5301-1 Plugs, AN6C52A Bolts, MS21043-6 Nuts) as shown in Figure 1. The new hardware will be included in D117-762-011 @ CHG 004 and subsequent.

2.0 INSTALLATION

For D117-762-011 @ CHG 004 and subsequent, the ground handling hardware should be installed as follows:

- 2.1 Loosely install (qty 2) D5300-1 GHL Bushing & (qty 2) D5301-1 GHL Plug wet with Proseal 890 or MIL-S-8802 Class B2 Sealant in location shown in Figure 1.
- 2.2 Install (qty 2) AN6C52A Bolts and (qty 2) MS21043-6 Nuts in accordance with Figure 1. Clean up squeezed out Proseal and apply fillet seal around D5300-1 & D5301-1.
- 2.3 Torque AN6C52A Bolts 160 - 190 in-lbs (18.1 - 21.5 N-m).

3.0 PARTS LIST

For D117-762-011 @ CHG 004 and subsequent, the Part List in IIN-D117-762 and ICA-D117-762 is modified as follows:

IS

ITEM	QTY -011	PART NUMBER	DESCRIPTION
	X	D117-762-011	SKIDTUBE INSTALLATION
50	2	AN6C52A	BOLT
51A	2	D5300-1	GHL BUSHING
51B	2	D5301-1	GHL PLUG
52	2	MS21043-6	NUT

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 165097
1708-15

A	NEW ISSUE	RF	17.01.09
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE, LTD EUGENE, OR	
DRAWN	RF		
CHECKED	WK	DRAWING NO.	REV.A
MFG. APPR.	N/A	DSI 9771	SHEET 1 OF 2
APPROVED	HS	TITLE	SCALE
DE APPR.		GHL UPGRADE KIT	NTS
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DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																											
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval																																																							
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																							
Root Cause		FAULT CATEGORY																																																													
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : 	
Misidentified ☐	Past Due ☐																																																														

WAS

ITEM	QTY -011	PART NUMBER	DESCRIPTION
	X	D117-762-011	SKIDTUBE INSTALLATION
50	2	AN6C51A	BOLT
51	4	D3864-1	BUSHING
52	2	MS21043-6	NUT

4.0 WEIGHT AND BALANCE

There is negligible weight and balance change associated with this modification.

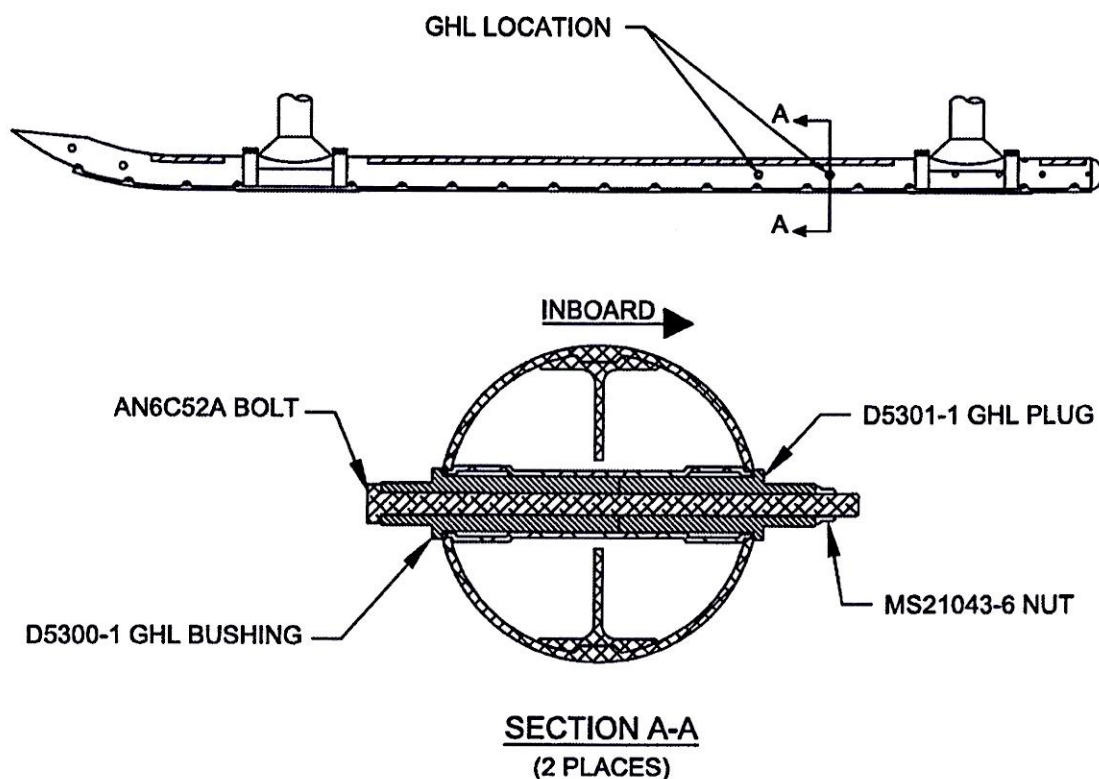


FIGURE 1 - GH L UPGRADE INSTALLATION

DESIGN	RF	DART AEROSPACE, LTD	
DRAWN	RF	EUGENE, OR	
CHECKED	WK	DRAWING NO.	REV.A
MFG. APPR.	N/A	DSI 9771	SHEET 2 OF 2
APPROVED	HS	TITLE	SCALE
DE APPR.		GH L UPGRADE KIT	NTS
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DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																

Work Order ID 165097

Tuesday, August 15, 2017 10:51:28 AM

165097

Sh.p 11 21 Page 1

Item ID: D117-762-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Skidtube with Standard Wearplates Fits LH or RH

Start Date: 8/17/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/29/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Run Start

NR1

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

NR2

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

DSI9771

A

IIN-D117-762

E

50
AUG 21 2017

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

1.50

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP D117-762-011

CHG004

1/5 18

17/8/31 18

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

5.0 PARTS LIST

5.1 D117-762-011 Skidtube Parts List

Item	Qty -011	Qty -041	Part Number	Description
	X		D117-762-011	SKIDTUBE INSTALLATION
	1	X	D117-762-041	REPLACEMENT SKIDTUBE
1		1	D3582-041	SKIDTUBE ASSEMBLY
2	2		**1121-51002	SKID SHOE
3	2		**1121-51102	CLAMPING RING
4	8		**LN9380M8X45	HEXAGON BOLT
5	8		**LN9023A8-1.4544.9	LOCKING WASHER
6	8		**LN9025-0815K	WASHER (OR LN9025-0815L)
10		1	*D2965	CAP
11		2	***AELS-1032-225	INSERT
12		2	*AN3C5A	BOLT
13		2	*NAS1149C0332R	WASHER (OR AN960C10L)
20A		1	*D3508-9	WEARPLATE
20B		1	*D3558-9	GASKET
21A		1	*D3508-3	WEARPLATE
21B		1	*D3558-3	GASKET
22A		1	*D3508-11	WEARPLATE
22B		1	*D3558-11	GASKET
23A		1	*D3508-13	WEARPLATE
23B		1	*D3558-13	GASKET
24		36	*AELS-1032-130	INSERT
25	8	28	*AN3C4A	BOLT
26	8	28	*NAS1149C0332R	WASHER (OR AN960C10L)
27	2		D3512-041	WEARPLATE
30		2	*AELS-1032-130	INSERT
31		2	*AN3C4A	BOLT
32		2	*NAS1149C0332R	WASHER (OR AN960C10L)
50	2		AN6C51A	BOLT
51	4		D3864-1	BUSHING
52	2		MS21043-6	NUT

* PART IS INCLUDED WITH D3582-041 SKIDTUBE ASSEMBLY

** TO BE SUPPLIED BY CUSTOMER, LISTED AS REFERENCE ONLY

*** DENOTES PART IS INCLUDED WITH ASSEMBLY ABOVE

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D117-762 REV. E AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D117-762 REV. 4

REF FAA STC: SR01853SE

REF: TC LETTER OF ACCEPTANCE RDIMS-4374899

REF EASA STC: EASA.10017063

1.0 PURPOSE

The purpose of this Dart Service Instruction (DSI) is to replace the ground handling lugs (D3864-1 Bushings, AN6C51A Bolts and MS21043-6 Nuts) on the D117-762-XXX Skidtubes with a structurally superior lug design (D5300-1 Bushings, D5301-1 Plugs, AN6C52A Bolts, MS21043-6 Nuts) as shown in Figure 1. The new hardware will be included in D117-762-011 @ CHG 004 and subsequent.

2.0 INSTALLATION

For D117-762-011 @ CHG 004 and subsequent, the ground handling hardware should be installed as follows:

- 2.1 Loosely install (qty 2) D5300-1 GHl Bushing & (qty 2) D5301-1 GHl Plug wet with Proseal 890 or MIL-S-8802 Class B2 Sealant in location shown in Figure 1.
- 2.2 Install (qty 2) AN6C52A Bolts and (qty 2) MS21043-6 Nuts in accordance with Figure 1. Clean up squeezed out Proseal and apply fillet seal around D5300-1 & D5301-1.
- 2.3 Torque AN6C52A Bolts 160 - 190 in-lbs (18.1 - 21.5 N-m).

3.0 PARTS LIST

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51B	2	D5301-1	GHl PLUG
52	2	MS21043-6	NUT

A	NEW ISSUE	RF	17.01.09
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE, LTD EUGENE, OR	
DRAWN	RF		
CHECKED	WK	DRAWING NO.	REV.A
MFG. APPR.	N/A	DSI 9771	SHEET 1 OF 2
APPROVED	HS	TITLE	SCALE
DE APPR.		GHl UPGRADE KIT	NTS
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